



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
HEADQUARTERS, EIGHTH UNITED STATES ARMY
UNIT #15236
APO AP 96205-5236

S: 16 April 2007

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13 March 2007

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Eighth United States Army 2007 Summer Safety Accident Prevention Plan

1. References

a. Memorandum, HQ, United States Forces, Korea, FKSF, 27 Feb 07, subject: [USFK 2007 Summer Safety Campaign](#).

b. Memorandum, HQ, Eighth United States Army, EASF, 8 Nov 06, subject: [Eighth United States Army FY07 Safety Campaign \(Zero Fatalities - R U Committed?\)](#).

2. Purpose

This memorandum outlines the Eighth United States Army (Eighth Army) 2007 Summer Safety Accident Prevention Plan. This plan will continue from 1 May 2007 through 30 September 2007. It implements the USFK 2007 Summer Safety Campaign and builds on the accident prevention efforts outlined in my Eighth Army FY07 Safety Campaign.

a. The purpose of the summer safety accident prevention plan is to:

(1) Provide implementation instructions and define goals and methods I expect this command to use to establish and maintain an effective summer safety program.

(2) Achieve our goal of reducing accidents rates by 20% and Zero Fatalities which supports the USFK command-wide goal of no loss of life and minimizing injuries and equipment damage during the summer season.

b. During the summer of FY06, Eighth Army experienced twelve heat-related injuries, three military fatalities, and one dependent fatality. One of the fatalities resulted from a single private motor vehicle accident while the Soldier was on CONUS leave. Another Soldier was struck by lightning during a field training exercise and the third Soldier suffered a heart attack shortly after participating in unit physical training. A dependent wife died as result of a head injury while riding a moped. Neither the family member nor the Soldier was wearing proper protective equipment.

c. We will "Set Conditions" by establishing guidelines to lessen the risks associated with summer-- high temperatures, monsoon rains, typhoons, lightning strikes, alcohol abuse, and other summer activities. We must ensure operational policies are in place and strictly enforced throughout our formations. My intent is to maintain a command

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climate that encourages all personnel to be cognizant of safe behavior and performance on and off-duty. Commanders will ensure integration of the summer safety accident prevention plan in all their supporting operational plans.

3. Summer Safety Programs

As leaders, our responsibility is to educate and protect our Soldiers from summer seasonal accidents/injuries. By 16 April 2007, MSC commanders will develop and execute a summer safety program that is tailored to their respective organizations. As you develop your summer safety programs emphasis should be placed on the prevention of hot weather and summertime related accidents involving monsoon rains, maintenance operations, physical training, vehicle operations, recreational activities, range operations, aviation operations, home safety and alcohol abuse. In addition, I want commanders to ensure an effective "hand off" of safety missions, responsibilities, levels of accountability, and oversight mechanisms to replacements up and down the chain during our summer time turnover. Commanders will comply with the following:

a. Accident Trend Analysis. Each unit will review and analyze their unit's accident and injury trends by 16 April 2007. This assessment process has proven to be an effective tool for tracking accidents, analyzing the root causes and raising awareness of safety lessons learned. This analysis will provide insight on safety issues that lead to accidents and injuries. This information will serve as a basis for developing accident prevention policies.

b. Composite Risk Management. Ensure the Composite Risk Management (CRM) process is integrated throughout the chain of command and into every aspect of unit activities. Leaders must ensure every unit member understands and applies the CRM principles effectively. First-line supervisors must initiate the CRM process for their Soldiers that will provide and maintain a workplace free from hazards. Commanders will ensure that all subordinate leaders are properly trained in the CRM process and remain engaged in mitigating risks on and off-duty.

c. Safety Training and Education. Commanders will ensure that all Soldiers are properly trained and prepared on our summer safety plan. Training will be scheduled and conducted throughout the summer season so that all personnel are trained on accident prevention measures for the summer activities by 1 May 2007 and within 10 days of assignment. Training will focus on the following areas:

(1) Weather: In both ground and air operations weather is a risk-multiplier. Destructive weather (monsoon rain and typhoon) season usually begins in late June and continues through the end of September. USFK Pam 385-3, A Systems Approach

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to Seasonal Safety, located at <http://www-hr.korea.army.mil> outlines the risk associated with destructive weather conditions. Leaders will use supporting weather elements and the 17th Operational Weather Squadron website at <https://17ows.hickam.af.mil> while conducting mission analysis and risk assessments. Commanders and leaders must ensure that all Soldiers know how to obtain weather and road condition information, i.e. USFK website <http://www.usfk.mil> or by calling 738-ROAD (738-7623).

(2) Heat Injuries: When properly trained our Soldiers can work safely in a hot-weather environment. The CRM process must be applied at all levels to all hot weather operations on and off-duty. Leaders must ensure Soldiers become acclimatized to the increased heat and humidity common to the Korean summers. Although acclimatization and water consumption strengthens heat resistance, the best protection against the effects of heat during training is proactive leader supervision and accurate risk assessments. Soldiers must look out for one another and must know how to detect and respond to early symptoms of heat injuries.

(3) Junior Leader Training: Conducting training through officer professional development (OPD) and non-commissioned officer development (NCODP) programs will ensure the successful implementation and continued support of our summer safety plan. For example, leaders must:

(a) Review the basic guidelines at enclosures 1 and 2 for preventing heat injuries.

(b) Inform our Soldiers and civilians how to protect against heat injuries, recognize heat injury symptoms, and provide first aid to heat casualties.

(c) Ensure that our CRM procedures provide techniques to mitigate the effects of hot weather on both training and leisure activities.

(d) Understand the cumulative effects of heat exposure when conducting on and off-duty activities.

(e) Ensure that subordinates knows our standards, makes them a daily leader habit, and is held accountable for the same.

(4) Aviation: Aviation operations require constant watch from our commanders, leaders, and both rated and non rated crewmembers. We must remain cognizant that human error remains the leading causal factor in 80% of our accidents and 66% of those can be directly linked to aircrew coordination failures. Human error can be

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something like a pilot toggling the wrong switch, failing to see power lines in front of the helicopter or failing to detect deteriorating weather.

(a) Aircrew coordination failure is a subset of human error and occurs when one crew member says to the other an ambiguous phrase, which is misinterpreted and leads to an event that is directly causal in an accident. Leadership is the most important factor in affecting aviation safety. Commanders at all levels must be personally involved with all aspects of aviation operations. The composite risk management process must be applied in aviation units to ensure that systems are in place which address the loss of situational awareness, inadequate aircrew coordination management, and specific aviation hazards. Improved crew coordination is a must.

(b) Leaders must balance operational hazards with flight hazards. They must assess not only the hazards, but also mitigation actions to minimize risk to its lowest level while still maximizing mission success. Leaders must know and appropriately team their crews and formations by pairing inexperience with experienced personnel and matching training complexity and risk with experience, competence, and confidence levels. Commanders must be fully cognizant of all situational conditions for aircraft operations of aircraft they own. We must take prudent steps to ensure that safe operational policies are in place and strictly enforced before aircraft are operated.

(c) Senior non-aviator passenger must exercise their senior occupant judgment responsibility by assisting the crew in situations involving decision-making during "go –no/go" situations particularly with un-forecasted weather. Leaders must evaluate every mission and ensure that not only the weather conditions support the planned mission, but also that the risks associated with deteriorating weather are addressed. The effects of deteriorating weather on mission completion and crew performance cannot be underestimated. Leaders should ensure that Inadvertent Instrument Meteorological Conditions (IIMC) procedures are briefed prior to every flight. The Aircrew Training Manual (ATM) clearly states, step-by-step, what to do after encountering IIMC. If weather gets bad, turn around and go back, or land where you are and wait it out. Or, if you are trained, equipped, prepared and proficient for IMC flight, request an IFR clearance from ATC and continue the mission IMC.

(5) Vehicles: Driving in Korea is a team sport; drivers and vehicle commanders must always anticipate the unexpected. With the large number of newly arriving personnel arriving during the summer months, units must conduct driver orientation program for Soldiers who drive military or privately owned vehicles. These programs must address the primary hazards associated with driving in Korea -- pedestrian crossings, cellular phone use, seatbelt requirements, motorcycle/scooter driving safety

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precautions, provisions outlined in appropriate driver training manuals, and vehicle preventive maintenance for summer weather operations. The USFK Pam 385-2, Guide to Safe Driving in Korea, provides information on traffic rules and concerns for driving in Korea and can be accessed from <http://www-hr.korea.army.mil>. Commanders must carefully consider exceptions to USFK Reg 190-1, Motor Vehicle Traffic Supervision reference driving privileges for E6 and below prior to approval. Furthermore, owners of POVs, to include motorcycles and mopeds, should not permit unauthorized or unlicensed personnel to operate vehicle for which they are responsible under any circumstances. Motor vehicle fatalities can be prevented by following two simple but proven rules; ALWAYS buckle up and NEVER drink and drive! Each one of us needs to take every precaution while operating a vehicle -- drive defensively and expect the unexpected.

(6) Memorial Day marks the beginning of summer -- a time for vacations, picnics, water activities, and enjoying the outdoors with family and friends. Memorial Day also marks the beginning of our summer accident prevention plan. Safety doesn't just happen. It is a byproduct of consciously weighing the risk of our actions and mitigating the risk before we act. We call this Composite Risk Management. We cannot surrender our safety or the safety of our personnel to serendipity. I expect leaders to conduct under the Oak Tree Counseling to ensure subordinates are briefed on the applicable summer hazards before the Memorial Day weekend, other long holiday weekends, and extended trips. See my [Command Policy letter #8](#) and the [Eighth Army FY07 Safety Campaign](#) for more guidance.

(7) Recreational Activities/Summer Sports: We want our Soldiers and their families to enjoy competitive sports and engage in recreational activities. However, we must not set them up for failure but give them the knowledge and training they need in preparing for these activities. Hiking, camping, bicycling, skating, water sports, football, soccer, picnics, and grilling are just a few areas that should be addressed. Personnel should be aware of the potential for and to avoid disturbing unexploded ordnance while hiking or camping and report any encounter to local authorities. Ensure all Soldiers are aware of off limits areas and establishments. See [USFK Website](#) and [USFK Reg 190-2](#).

(8) Wellness Issues: There are many issues that can affect our Soldiers, Civilian employees, and Family members.

(a) Suicide Prevention. Although we had no suicides in FY06, we must remain cognizant of the risk. Accordingly, leaders must be educated on risk reduction information to enable them to identify Soldiers with suicidal/homicidal thoughts and to

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(b) Alcohol and Substance Abuse. In FY06, Eighth Army had 24 DUI/DWI offenses reported. Statistics also show that the majority of the Soldiers enrolled in the Alcohol Abuse program were: male, 18-31 years old, single, with one to four years time-in-service. I expect commanders to take aggressive and appropriate measures to prevent alcohol and substance abuse. We must rely on our junior leaders to attack this problem especially when conducting UTOT counseling. Our junior leaders require training in this area as they often find it difficult to engage in discussion on alcohol consumption. But it is something they must do.

(c) Domestic Violence/Sexual Assault. Sexual assault is a crime that will not be tolerated. The chain of command is responsible and accountable for the conduct of our personnel. We must put a stop to sexual assaults. Newly arrived personnel must receive proper cultural orientation to life in Korea especially over extended weekend periods and holidays. Leaders will contact their Family Advocacy Program (FAP) and Area Sexual Assault Response Coordinators (SARC) for information on domestic violence/sexual assault. Information on the UFK Assault Prevention and Response Program is linked to the [USFK Website](#). Leaders must remain cognizant of the risk and remind everyone to support each other; this is what "battle buddies" do.

(d) Food Safety. Whether preparing food for a family cookout or a company gathering, people who are great cooks at home don't necessarily know how to safely prepare and store large quantities of food for large gatherings. Food that is mishandled can cause foodborne illness. The risk of foodborne illnesses increases during the summer when temperatures are warmer and people are more likely to be cooking outside at picnics, barbeques, and on camping trips. You can minimize your family's risk of food poisoning by following some simple guidelines about food safety. Taking universal safety precautions will go a long way in fighting bacteria:

- Clean: Wash hands and surfaces often to avoid the spread of bacteria.
- Separate: Keep raw foods separate from cooked foods to avoid cross contamination.
- Cook: Make sure you Kill harmful bacteria by cooking food until it reaches the proper temperature.
- Chill: Keep cold food cold. Letting food sit at unsafe temperatures puts you at risk for foodborne illnesses.

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Leaders should contact their local wellness coordinator or medical facility for more information.

(9) Information Distribution: Leaders must ensure that safety information and safety measures reach the Soldier, Civilian employee, and Family Member levels. In order to do this, they must publish and distribute safety campaign articles and materials and coordinate with American Forces Network and print media. Also, commanders and other leaders can use safety councils, local media, email messages, official unit websites, and safety alerts to distribute this important safety information.

4. Requirements Summary:

- a. Develop a summer safety accident prevention plan by 16 April 2007 that concentrates on the areas outlined in paragraph 3.
- b. Ensure that summer safety training is scheduled and conducted, and that all personnel are trained and prepared on summer accident prevention measures by 1 May 07 and that newly assigned personnel are trained within 10 days of assignment.
- c. Conduct OPD and NCODP programs that train leaders for successful implementation, UTOT Counseling techniques, and continued support of this plan.
- d. Monitor subordinate units in their execution of this plan.
- e. Ensure that a process which penetrate our formations down to squad level is in place for relating to off-duty risks for activities including camping, hiking, boating, grilling, picnics, sports, and swimming. In addition, ensure personnel are aware not to disturb unexploded ordnance (UXO) and report any sighting to local authorities.
- f. Ensure the composite risk management process is used by first-line supervisors/leaders for all operations, activities, and UTOT counseling.
- g. Record lessons learned on safety related issues and submit them to the Eighth Army CSO.
- h. Ensure newly arriving personnel have completed theater required training IAW USFK Regulation 350-2, Theater Specific Required Training.
- i. Ensure that all personnel understand my expectation for proper conduct and discipline.

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j. Area Commanders will publish summer safety articles in local area newspapers and media beginning on 1 May 2007.

k. Heighten awareness and emphasize moderation of alcohol consumption and the use of designated drivers, designated sober buddy, and ride-home programs.

l. Review events planned for summer recreational and training activities to ensure hot-weather risk management is applied and appropriate controls are in place.

m. Beginning 1 May 2007 Eighth Army PAO will publish campaign safety information in appropriate media.

n. Provost Marshall Office (PMO) will enforce road standards for vehicles and operators, including "Click It or Ticket," no driving with cell phones, and sobriety test programs.

5. I expect leaders to identify the risk that are inherent in our operations and implement appropriate countermeasures through detailed mission analysis that mitigates the risks that our personnel will face. We are accountable. Brigade level commanders will certify that their programs are in compliance with this summer safety accident prevention plan and the above references. MSC commanders will provide me feedback on the status of their summer accident prevention programs on 6 April 2007 at the Eighth Army Commanders' Safety Council.

6. My goal is to have an accident-free summer with zero incidents of sexual assault, or alcohol misuse. We can achieve this goal if operating standards are clear, practical, and rigidly enforced from start to finish. Taking care of Soldiers is our first priority – Caring leaders ensure this. Engaged leadership at echelon and first line supervisors knowing where the risk is; who is at risk; and what to do to mitigate the risk will enable us to close on the objective.

7. Pacific Victors!

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DAVID P. VALCOURT
Lieutenant General
Commanding

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DISTRIBUTION:

COMMANDER

2D INFANTRY DIVISION (EAID-CG)

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19TH MILITARY POLICE BATTALION (CID) (CIMPK-ZA)

DIRECTOR, INSTALLATION MANAGEMENT COMMAND KOREA REGION (IMKO-ZA)

Enclosure 1 Commander's, Senior NCO's, and Instructor's Guide to Risk Management of Heat Casualties

Composite Risk Management is the process of identifying and controlling hazards to protect the force.

Possible Outcomes of inadequate climatic heat management:

Casualty

Heat Cramps
Heat Exhaustion
Heat Stroke
Water Intoxication (Over Hydration)

Risk Severity

Marginal
Critical
Critical-Catastrophic
Critical-Catastrophic

The Five Steps of Risk Management are:

1

Identify Hazards

High heat category, especially on several sequential days
(Measure WBGT when ambient temperature is over 75° F)

Exertional level of training, especially on several sequential days

Acclimatization (and other individual risk factors – see table below)

Time (length of heat exposure and recovery time)

Individual Risks for Heat Casualties (The more factors, the higher the risk)

- **Not acclimatized** to heat (need 10-14 days to get trainees adequately acclimated)
- Exposure to cumulative days (2-3 days) of any of the following
 - Increased heat exposure
 - Increased exertional levels
 - Lack of quality sleep
- Poor fitness (Unable to run 2 miles in < 16 minutes)
- Overweight
- Minor illness (cold symptoms, sore throat, low grade fever, nausea, vomiting)
- Taking medications (either prescribed or over the counter)/supplements/dietary aids Ex: Allergy or cold remedies. Ephedra supplement
- Use of Alcohol in the last 24 hours
- Prior history of heat illness (any heat stroke, or >2 episodes of heat exhaustion)
- Skin disorders such as heat rash and sunburn which prevent effective sweating
- Age > 40 years

2 Assess Hazards

- When ambient temperature is over 75° F, constantly assess the **heat category** using Wet Bulb Globe Temperature (WBGT)
- Know your Soldiers! Identify early who will be at increased risk based on **individual risk factors**
- Check **hydration status** at the end of each training day. Give extra fluid at night and in the morning if hydration is inadequate
 - Review Riley (water) card or Ogden cords
 - Ask about urine color. Urine is clear if well hydrated
- Daily **assess the overall risk** for developing a heat casualty (may use a risk matrix)

The following matrix has been used successfully through experience by Commanders.

Example of a Heat Injury Risk Management Matrix

Scores assigned to different conditions based on risk for developing a heat injury.
This scoring system: 0= Low risk; 1=Medium risk, 2=High risk; 3=Extreme risk

RISK FACTORS	Level of Risk (For each Factor Circle the Appropriate Condition)			
	0	1	2	3
Risk Management Worksheet	All control measures implemented			Not all control measures implemented
Heat (WBGT at site)	None (Less than Category 1)	Category 1	Category 2 and 3	Category 4 and 5
No. Sequential Days Heat Cat 5	0	1	2-3	≥4
Heat Injuries in the unit in Past 2 Days	None	Heat Cramps	Heat Exhaustion	Heat Stroke*
Work in Past Two Days (see below)	Easy	Easy	Moderate	Hard
Projected Work for the Present Day	Easy	Easy	Moderate	Hard
Heat Acclimatization Days	>13	7-13	3-6	<3
Leader/Cadre Presence	Full time	Substantial	Minimal	None
Length of Duty Time of Cadre	18 Months	7-18 Months	1-6 Month	< 1 Month
Communication System	Radio and Phone	Phone Only	Radio Only	None
Rest in Previous 24 Hours	> 7 Hours	5-7 Hours	2-4 Hours	< 2 Hours

Cumulative score: 25-33 = extreme risk, 16-24 = high risk, 7-15 = medium risk, 0-6 = low risk.

* If Heat Stroke has occurred in unit in past 2 days, risk level= extreme risk

Easy Work	Moderate Work	Hard Work
<ul style="list-style-type: none"> • Weapon Maintenance • Walking Hard Surface at 2.5 mph, < 30 lb Load • Marksmanship Training • Drill and Ceremony 	<ul style="list-style-type: none"> • Walking Loose Sand at 2.5 mph, no Load • Walking Hard Surface at 3.5 mph, < 40lb Load • Calisthenics • Patrolling • Individual Movement Techniques. i.e. low crawl, high crawl 	<ul style="list-style-type: none"> • Walking Hard Surface at 3.5 mph, ≥ 40 lb Load • Walking Loose Sand at 2.5 mph with Load • Field Assaults

3

Develop Controls

Education

- Establish SOPs. Ensure all personnel are trained and follow SOPs for Heat Casualty Prevention
- Ensure all bulletin boards have Heat Casualty Prevention posters and all leaders have Heat Casualty Prevention aids

Planning

- Adjust the training schedule to minimize consecutive days of heavy physical training, especially if other heat stressors exist (e.g., heat exposure and lack of quality sleep)
- Plan communications, medical and evacuation support
- Plan and provide adequate hydration for *all* personnel (including Cadre and Drill Instructors)
- When planning training events, keep in mind:
 1. **Time of day the training is conducted** – morning is cooler
 2. **Location of training**
 - Sun vs. shade. Rest in shade.
 - Open vs. protection from wind - wind has cooling effect
 - Open up the formation to decrease heat strain
 3. **Clothing**
 - Heavy, restrictive vs. loose, lightweight
 4. **Where in training cycle**
 - Most heat casualties occur in the 2nd or 3rd week of recruit training
 - Acclimatization can take 7-14 days, depending on the physical condition of the trainee
- After moderate to hard work in heat category ≥ 3 ; take cold, nude showers at the end of the day

Identification

- Identify previous heat exhaustion or heat stroke Soldiers and mark visibly on uniform (tape or cord)
- Identify overweight Soldiers and Soldiers who are unfit
- Identify Soldiers on medications and mark visibly on uniform (tape or cord)
- Seriously consider taking Soldiers out of training who have had alcohol within the last 24 hours
- Seriously consider having ill Soldiers seen on sick call.
- Note and document heat category hourly. Position WBGT at site of training

Develop a Hydration Monitoring System

- Examples of monitoring methods:

- **Riley (water) card.** On the card, Battle buddy is to write the amount of water the Soldier has drunk.

Water Consumption Card							
Name: _____							
Time	Mon	Tue	Wed	Thur	Fri	Sat	Sun
0500-0600							
0600-0700							
0700-0800							
0800-0900							
0900-1000							
1000-1100							
1100-1200							
1200-1300							
1300-1400							
1400-1500							
1500-1600							
1600-1700							
1700-1800							
1800-1900							
1900-2000							
2000-2100							
2100-2200							

- **Ogden Cord** is 550 cord, parachute cord, or shoestring that is tied to a uniform buttonhole or ear protection case. Soldiers tie a knot in the cord each time they finish a canteen (1 quart) of water.



3

Develop Controls continued

Know Standardized Guidelines for Warm Weather Training Conditions

Fluid Replacement and Work/Rest Guide

Acclimatized (after approx two weeks training) Wearing BDU, Hot Weather

Heat Category	WBGT Index, (F°)	Easy Work		Moderate Work		Hard Work	
		Work/Rest	Water Intake (Qt/h)	Work/Rest	Water Intake (Qt/h)	Work/Rest	Water Intake (Qt/h)
1	78-81.9	NL	½	NL	¾	40/20 min	¾
2 (Green)	82-84.9	NL	½	50/10 min	¾	30/30 min	1
3 (Yellow)	85-87.9	NL	¾	40/20 min	¾	30/30 min	1
4 (Red)	88 89.9	NL	¾	30/30 min	¾	20/40 min	1
5 (Black)	> 90	50/10 min	1	20/40 min	1	10/50 min	1

- The work-rest times and fluid replacement volumes will sustain performance and hydration for at least 4 hrs. of work in the specified heat category. Fluid needs can vary based on individual differences ($\pm \frac{1}{4}$ qt/h) and exposure to full sun or full shade ($\pm \frac{1}{4}$ qt/h).
- NL= no limit to work time per hour.
- Rest means minimal physical activity (sitting or standing), accomplished in shade if possible.
- CAUTION:** Hourly fluid intake should not exceed 1½ quarts.
- Daily fluid intake **should not exceed 12 quarts.**
- If wearing body armor add 5°F to WBGT in humid climates.
- If wearing NBC clothing (mission-oriented protective posture (MOPP 4)), add 10°F to WBGT index for easy work, and 20°F to WBGT index for moderate and hard work.

Easy Work = Walking hard surface 2.5 mph <30lb load, Weapon maintenance, Marksmanship training

Moderate Work = Patrolling, Walking sand 2.5 mph no load, Calisthenics

Hard Work = Walking sand 2.5 mph w/load, Field assaults

Continuous Work Duration and Fluid Replacement Guide

Acclimatized (after approx two weeks training) Wearing BDU, Hot Weather

It is assumed the trainees performing these continuous effort tasks have not yet had heat stress or dehydration prior to this activity and will have several hours of rest afterwards.

Heat Category	WBGT Index, (F°)	Easy Work		Moderate Work		Hard Work	
		Work (min)	Water Intake (Qt/h)	Work (min)	Water Intake (Qt/h)	Work (min)	Water Intake (Qt/h)
1	78-81.9	NL	½	NL	¾	70	1
2 (Green)	82-84.9	NL	½	150	1	65	1 ¼
3 (Yellow)	85-87.9	NL	¾	100	1	55	1 ¼
4 (Red)	88 89.9	NL	¾	80	1 ¼	50	1 ¼
5 (Black)	> 90	180	1	70	1 ½	45	1 ½

- NL can sustain work for at least 4 hours in the specified heat category.
- Fluid needs can vary based on individual differences ($\pm \frac{1}{4}$ qt/hr) and exposure to full sun or full shade ($\pm \frac{1}{4}$ qt/hr).

4

Implement Controls



Decision to accept risk is made at the appropriate level

- Made in accordance with appropriate MACOM regulation



Identified controls are in place

- Update WBGT hourly when ambient temperature is $\geq 75^{\circ}\text{F}$
- Adhere to work/rest cycle in high-heat categories. Rest in shade
- For tasks requiring continuous effort, adhere to guideline and allow extended rest afterwards
- Training event incorporates good prior planning



Monitor and enforce hydration standard

- Encourage frequent drinking, but not to exceed **1 ½** quarts per hour or **12** quarts per day. Make water more palatable, if possible, by cooling
- Do not allow Soldiers or trainees to empty canteens to lighten load (consider imposing a penalty in timed events)
- Ensure Soldiers are well hydrated before training. Ask about urine; urine is clear if well hydrated
- Check Riley (water) card or Ogden Cord frequently



Monitor and enforce eating meals

- Ensure all meals are eaten during the meal break
- Ensure adequate time to eat and drink meals
- Table salt may be added to food when the heat category is high. Salt tablets are *not* recommended



Execute random checks

- Spot checks by Cadre, Senior NCO's, and Drill Instructors
- Enforce battle buddy checks – need to be aware of each other's eating, drinking, and frequency of urination
- Plan placement of leaders to observe and react to heat injuries in dispersed training



Follow clothing recommendations

- Heat category 1-2: no restrictions
- Heat category 3: Unblouse trouser legs, unbuckle web belt
- Heat category 4-5:
 - Unblouse trouser legs, unbuckle web belt
 - Remove t-shirt from under BDU top or remove BDU top down to T-shirt (depends whether biting insects are present)
 - Remove helmets unless there are specific safety reasons to keep them on (e.g.: range)
- MOPP 4: Add **10°F** to WBGT index for easy work, and **20°F** to WBGT index for moderate to hard work

5 Supervise & Evaluate

- Enforce SOPs.
- Delegate authority to ensure control measures have been implemented.
- Monitor adequacy/progress of implementation of control measures.
- Conduct spot checks of cadre. Do cadre have current WBGT? Are cadre implementing work/rest/drink cycles? Make on-the-spot corrections. Lead by example.
- Conduct spot checks of recruits. Ask recruits questions while observing their mental status and physical capabilities. Look out for common signs and symptoms which can rapidly progress to serious signs and symptoms. Ask recruits when did they last urinate and was their urine clear?
- If 1-2 recruits become heat casualties, stop all training and evaluate each Soldier for early signs and symptoms of becoming an impending heat casualty.
- When controls fail, heat injuries occur. The ability to recognize heat injury is paramount. Take immediate action if any heat injuries are observed or suspected. Stop-rest-cool then evaluate in accordance with warning signs and symptoms. If in doubt, evacuate.

Warning Signs and Symptoms of Heat Casualty and Water Intoxication

Indications of possible Heat Casualty	
<p>More Common Signs/Symptoms</p> <ul style="list-style-type: none"> • Dizziness • Headache • Nausea • Unsteady walk • Weakness or fatigue • Muscle cramps 	<p>Immediate Actions</p> <ul style="list-style-type: none"> • Remove from training • Allow casualty to rest in shade • Loosen clothing • Take sips of water • While doing the above, call for a Medic to evaluate the Soldier (Medic will monitor temperature and check for mental confusion) <p>If no medic is available, call for ambulance or Medevac</p>
<p>Serious Signs/Symptoms</p> <ul style="list-style-type: none"> • Hot body, high temperature • Confusion, agitation (Mental Status Assessment) • Vomiting • Involuntary bowel movement • Convulsions • Weak or rapid pulse • Unresponsiveness, coma 	<p>Immediately call Medevac or ambulance for emergency transport while doing the following:</p> <ul style="list-style-type: none"> • Lay person down in shade with feet elevated until Medevac or ambulance arrives • Undress as much as possible • Aggressively apply ice packs or ice sheets • Pour cold water over casualty and fan • Give <u>sips</u> of water while awaiting ambulance (if conscious) • Monitor airway and breathing until ambulance or Medevac arrive

Indications of possible Water Intoxication (Over Hydration)

Signs and Symptoms

Confusion
Weakness
Vomiting

What to do:

Ask these questions to the Soldier or battle buddy:

1. Has Soldier been eating? Check rucksack for # of MRE's left.
2. Has Soldier been drinking alot? (suspect water intoxication if Soldier has been drinking constantly).
3. How often has Soldier urinated? (frequent urination seen with water intoxication; infrequent urination with heat illness)
4. What color is urine (clear urine may indicate over hydration)

If Soldier has been eating, drinking, and urinating a lot, yet has these symptoms, **immediately call Medevac or ambulance for emergency transport**

Mental Status Assessment

An important sign that the Soldier is in a **serious life-threatening** condition is the presence of mental confusion (with or without increased temperature). Anyone can do a mental status assessment asking some simple questions.

Call for emergency Medevac or ambulance if any of the following exist:

What is your name?

(Does not know their name.)

What month is it? What year is it?

(Does not know the month or year.)

Where are we/you?

(Is not aware of location or surroundings.)

What were you doing before you became ill?

(Does not know the events that led to the present situation.)

THIS GUIDE WAS ADOPTED FROM THE U.S. ARMY CENTER FOR
HEALTH PROMOTION AND PREVENTIVE MEDICINE.

Hot Weather Casualties and Injuries Chart

- Train commanders and Soldiers on heat injury prevention and heat risk assessment
- Remember the acronym **H-E-A-T** when training in hot weather
(**H**: heat category; **E**: exertion level; **A**: acclimatization; **T**: time of heat exposure and recovery time)
- Follow recommended fluid replacement guidelines and ensure nutritional requirements are met

Hot Weather Injuries and Casualties

Cause	Symptoms	First-Aid	Prevention
Sunburn			
<ul style="list-style-type: none"> • Exposure of skin to direct sun • Can occur on overcast days • Not acclimatized to hot weather 	<ul style="list-style-type: none"> • Red, hot skin • May blister • Moderate to severe pain • Can result in fever 	<ul style="list-style-type: none"> • Move to shade; loosen clothing if necessary • Apply cold compress or immerse in cool water • Apply moisturizing lotion to affected areas • Hydrate with fluids • Administer analgesics for pain or fever • Do not break blisters 	<ul style="list-style-type: none"> • Adequate sun protection • Use sunscreen liberally and apply often, especially when sweating excessively • Select SPF 15 or higher • Proper wear of clothing, cap
Heat Rash (Prickly Heat)			
<ul style="list-style-type: none"> • Restrictive clothing • Excessive sweating • Inadequate hygiene • Causes heat intolerance if 20% of skin affected 	<ul style="list-style-type: none"> • Red, itchy skin • Bumpy skin due to blocked pores • Moderate to severe itching • Can result in infection 	<ul style="list-style-type: none"> • Apply cold compress or immerse in cool water • Keep area affected dry • Control itching and infection with prescribed medications 	<ul style="list-style-type: none"> • Proper wear of clothing • Shower (nude) after excessive sweating
Heat Cramps			
<ul style="list-style-type: none"> • Excessive loss of salt from body due to excessive sweating • Not acclimatized to hot weather 	<ul style="list-style-type: none"> • Painful skeletal muscle cramps or spasms • Mostly affects legs and arms 	<ul style="list-style-type: none"> • Replace salts • Sit quietly in the shade or cool area • Massage affected muscle • Drink oral rehydration package or sports drink • Drink 0.05 to 0.1% salt solution (add ¼ of MRE salt packet to 1 quart canteen) • Get medical evaluation if cramps persist 	<ul style="list-style-type: none"> • Eat all meals to replace salt • Consume salt-supplemented beverages if adequate meals have not been consumed prior to prolonged periods of heavy sweating • Ensure adequate heat acclimatization
Heat Exhaustion			
<ul style="list-style-type: none"> • Body fatigue and strain on heart due to overwhelming heat stress • Dehydration (see below) • Inadequate acclimatization • Inadequate physical fitness for the work task • Most common exertional heat illness 	<ul style="list-style-type: none"> • Dizziness • Fatigue • Weakness • Headache, nausea • Unsteady walk • Rapid pulse • Shortness of breath 	<ul style="list-style-type: none"> • Initiate active cooling by best means available • Move to shade and loosen clothing • Lay flat and elevate feet • Spray/pour water on Soldier and fan for cooling effect or use ice sheets around neck, arm pits and groin, if available • Monitor with the same (one) instructor or supervisor • Assess Soldier's mental status every few minutes • Have Soldier slowly drink one full canteen (quart) of cool water every 30 minutes with a maximum of 2 canteens • If not improved in 30 to 60 minutes, evacuate for further medical care • NOTE: Those who recover within 60 minutes should return to light duty on a profile for the remainder of the day 	<ul style="list-style-type: none"> • Allow for acclimatization • Monitor WBGT • Keep Soldiers in shade whenever possible • Follow water replacement guides • Observe work-rest cycles • Identify high risk individuals • Maintain buddy system • Eat all meals in garrison and field • Do not take dietary supplements • Modify uniform accordingly • Teach early recognition of symptoms • Recognize cumulative effect of sequential hot days • Reevaluate training mission if several mild heat injuries occur
Heat Stroke			
<ul style="list-style-type: none"> • Prolonged exposure to high temperatures • Cumulative heat stress due to repetitive activity in hot environment • Failure of body's cooling mechanisms • Prolonged and overwhelming heat stress • Predisposing factors such as sickness, poor health or certain medications 	<ul style="list-style-type: none"> • Any of above symptoms, but more severe • Nausea, vomiting • Altered mental status with agitation, confusion, delirium, disorientation • Elevated temperature, usually above 104° F • Can progress to loss of consciousness, coma, and seizures 	<ul style="list-style-type: none"> • This is a medical emergency and can lead to death! Evacuate Soldier to a medical facility immediately! • Begin cooling aggressively Body temperature that does not go below 100° F with active cooling or ANY mental status changes calls for immediate evacuation • Initiate measures for heat exhaustion • Apply ice packs or iced sheets • Assess Soldier's mental status every few minutes • If conscious, give sips of cool water while waiting for evacuation or ambulance • Do not give water to unconscious Soldier • If possible, measure body temperature • Monitor airway and breathing • If medic or CLS is present, start intravenous (IV) fluids but limit to 500 ml NS or LR • Continue cooling process during transport (until body temperature reaches 100° F) 	<ul style="list-style-type: none"> • Follow measures for heat exhaustion • Plan medical support for heat intensive operations • Ensure appropriate Evacuation capabilities available • Ensure Preventive Medicine personnel and measures are in place
Additional Medical Considerations in the Hot Weather Environment:			
Dehydration			
<ul style="list-style-type: none"> • Depletion of body fluids and possibly salt 	<ul style="list-style-type: none"> • Dizziness • Weakness and fatigue • Rapid pulse 	<ul style="list-style-type: none"> • Replace lost water and salt • Water should be sipped, not gulped • Get medical treatment 	<ul style="list-style-type: none"> • Drink 3-6 quarts of fluid per day • Follow fluid replacement guidelines • Consume full meals and drink at mealtime • Do not take dietary supplements
Over Hydration (Hyponatremia)			
<ul style="list-style-type: none"> • Over hydration or water intoxication • Decreased meals or dieting • Loss of body salt • Misdiagnosis and treatment for dehydration 	<ul style="list-style-type: none"> • Confusion • Weakness • Nausea, vomiting 	<ul style="list-style-type: none"> • Replace salt loss • Follow measures for heat exhaustion • If symptoms persist or become more severe with rehydration, immediate evacuation 	<ul style="list-style-type: none"> • Follow fluid replacement guidelines • Replace lost salt by consuming meals and sports drinks, as directed. • Provide snacks or carbohydrate electrolyte beverage during long training events • Do not take dietary supplements

Ten Commandments of Preventing Heat Injury

1. Provide adequate water and ensure water breaks are taken every 15 to 20 minutes. Do not exceed 1 1/2 quarts per hour. Thirst is not an adequate indicator of dehydration. Alcohol, coffee, soft drinks, and sports drinks are not good substitutes for water. Do not use salt tablets!
2. Ensure soldiers gradually adjust to working in the heat. Acclimatization is essential in preventing heat injuries.
3. Schedule work/rest periods. Schedule heavy work for the cooler part of the day (morning or late afternoon). The body generates more heat when heavy work is being performed. Consider scheduling periodic high-intensity training activities (such as the Expert Infantryman Badge (EIB) and Expert Field Medical Badge (EFMB) tests) during the early spring or late fall months to take advantage of the cooler weather.
4. Avoid overexertion. Use mechanical aids whenever possible. Assign tasks between several soldiers to reduce the stress on individuals.
5. Use shaded areas (trees, buildings, tents) to reduce radiant heating. The temperature in the sun and under the canopy of a tree can vary from 8° to 20°F.
6. Encourage use of sunscreens to protect exposed skin.
7. Wear loose-fitting, light-weight, light-colored clothing. Do not layer clothing; more clothing increases the risk of heat injury. Consider protective equipment- such as MOPP gear-when planning and scheduling activities.
8. Monitor WBGT so the heat-stress index can be evaluated. Environmental conditions, such as temperatures above 70°F (80°F at night), direct sunlight, humidity, and exposure to any toxic agents add to heat stress. The wind reduces the risk of heat stress by increasing the evaporation of sweat.
9. Train Soldiers to recognize and treat heat injuries and encourage them to monitor each other for signs of heat stress.
10. Conduct safety meetings to emphasize special heat spell procedures. Be prepared to provide medical assistance.

If you have any questions or need additional information, use the 11th Commandment below:

Contact your Area Force Health Protection (Preventive Medicine) Services